

**ABSTRACT**

**OPTICAL MICROSYSTEM AND FABRICATION PROCESS**

The invention relates to the fabrication of optical microsystems for miniature cameras or miniature matrix displays.

It is proposed that N dot matrix arrays and associated circuits should be collectively fabricated, on the front of a semiconductor wafer, to produce N identical chips (10), with on the side of each array, external connection lands (CC); a plate (22), used to collectively form N identical optical image-forming structures, each optical image-forming structure covering a respective chip (10) and being designed to form an overall image corresponding with the whole of the matrix array of the respective chip, is fabricated collectively and placed in close contact with the front of the semiconductor wafer; through the thickness of the wafer, conductive vias (32) extending to the contact lands are opened, and, only after these various operations, the wafer is divided into N individual optical microsystems comprising an electronic chip covered by an optical structure.

Fig. 6